

MOTOMAN SP165

Spot Welding with the SP-series



The MOTOMAN SP165 is a high-performance standard spot welding and handling robot with 165 kg payload. It is suitable for a wide range of common spot-welding guns and technologies, especially also for servo-controlled welding guns with robot-assisted gun alignment. Its slim design does not require a mechanical counterbalance and allows low moving masses as well as higher accelerations and speeds. The stable wrist is particularly suitable for small and fast positioning movements, as are common in spot welding applications.

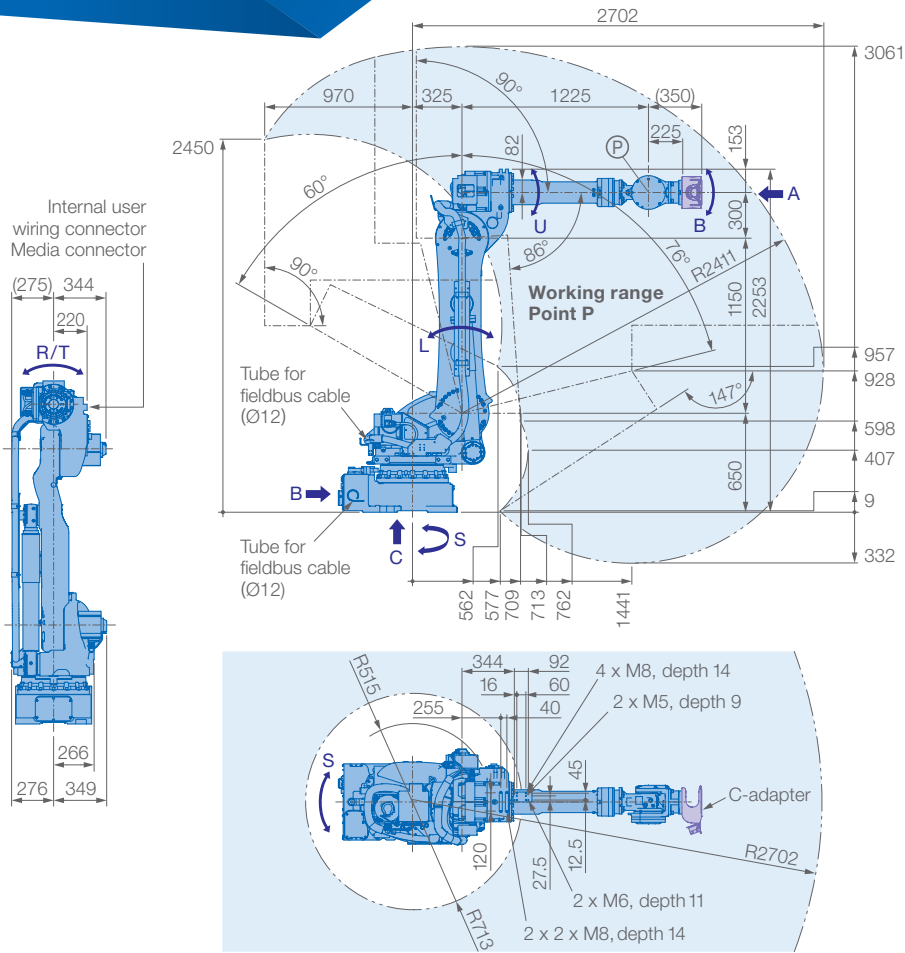
The MOTOMAN SP165 features the latest Yaskawa Sigma7 servo drive technology, is state-of-the-art in terms of dynamics and energy efficiency, and enables outstanding cycle times.

KEY BENEFITS

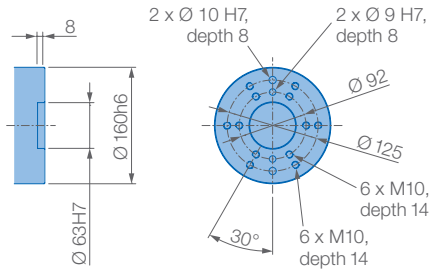
- Versatile application possibilities
- High payload (165 kg including C-adapter) and large working range (2702 mm)
- High repeatability (± 0.05 mm)
- Minimum space requirements
- Integrated cable and media guide in the robot arm
- High robot density in production line possible
- Shortened process times
- High dynamics

OPTIONS

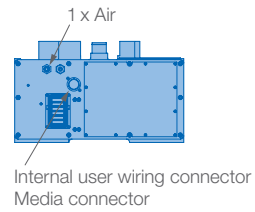
- Cable packages of different types, easily adaptable
- C-adapter for optimal cable routing at the wrist
- Pedestals and base plates
- Extended robot cables
- Fieldbus and Safety Bus options
- External drive axes, tracks
- Functional Safety Unit (FSU), area limitations
- Vision system, e.g. MotoSight 2D



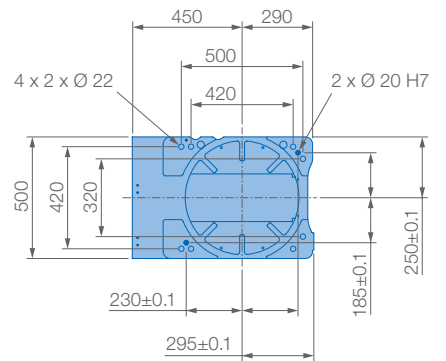
View A



View B

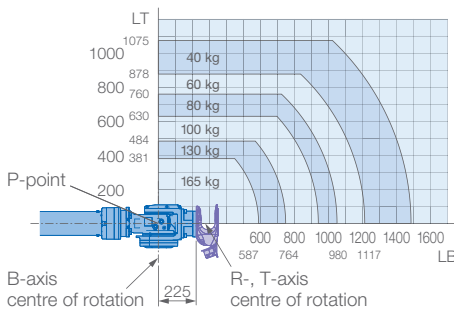


View C



Mounting option: Floor
IP Protection: IP54 (body), IP67 (wrist)

Allowable wrist load with C-adaptor



| Specifications SP165 | | | | | |
|----------------------|--------------------------|---------------------|-----------------------|--|-----------------------------|
| Axes | Maximum motion range [°] | Maximum speed [°/s] | Allowable moment [Nm] | Allowable moment of inertia [kg · m ²] | Controlled axes |
| | | | | | 6 |
| | | | | | Max. payload [kg] |
| | | | | | 165 (180°) |
| S | ±180 | 125 | – | – | Repeatability [mm] |
| L | +76/–60 | 115 | – | – | ±0,05 |
| U | +90/–86 | 125 | – | – | Max. working range R [mm] |
| R | ±210 (±360°) | 182 | 951 (1000*) | 88 (90°) | 2702 |
| B | ±125 (±130°) | 175 | 951 (1000*) | 88 (90°) | Temperature [°C] |
| T | ±210 (±360°) | 265 | 618 | 46.3 | 0 to +45 |
| | | | | | Humidity [%] |
| | | | | | 20 – 80 |
| | | | | | Weight [kg] |
| | | | | | 1020 |
| | | | | | Power supply, average [kVA] |
| | | | | | 5.0 |

* without C-adaptor

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